



#437

OV1-13

CONCATENATED DATA TAPES

68-026A-02B + 04B

001-13

COUNT RATES, TAPE

68-026A-02B

68-026A-04B

This data set has been restored. There was originally 3 Binary 9-Track, 1600 BPI tapes. There is one restored tape. The DR tapes are 3480 cartridges and the DS tapes are 9-track, 6250 BPI. The tapes were created on the MODCOMP. The DR and DS numbers along with the corresponding D numbers and the time spans are as follows:

DR#	DS#	D#	FILES	TIME SPAN
DR03334	DS03334	D33385	1-5	05/13/68 - 05/21/68
		D33387	6-11	06/07/68 - 07/06/68
		D33386	12-14	07/09/68 - 07/11/68

REQ. AGENT

CMP

RAND NO.

RD1887

ACQ. AGENT

MJT

OVI-13

CONCATENATED DATA TAPES

68-026A-02B & 04B

This data set contains 3 data tapes. They are 9 track, 1600 BPI, multi-filed and were created on the MODCOMP. They are written in binary.

<u>D#</u>	<u>C#</u>	<u>FILES</u>	<u>TIME SPAN</u>
D-33385	C-20450	5	05/13/68 - 05/21/68
D-33386	C-20451	3	07/09/68 - 07/11/68
D-33387	C-20452	6	06/07 68 - 07/06/68

## OVI-13 Concatenated Data Tapes #1, 2, and 3

The OVI-13 Concatenated Data Tapes #1, 2, and 3 contain the data from the electron magnetic analyzer (e-MA) (0.1 to 1.0 MeV) and from the electron scintillation spectrometer (e-S) aboard the Air Force OVI-13 satellite. These tapes were produced on a MODCOMP IV computer. They are 9 track, 1600 b.p.i., binary tapes containing 5, 6, and 3 files respectively. The data are from 15 separate orbits between March and July, 1968, as listed in Table 1. These tapes were generated through several steps from, and contain the same data as do, the earliest unpacked OVI-13 data tapes available at the NSSDC.

The first logical record of each file is a header record containing twenty-two 32-bit words of ephemeris data, as listed in Table 2.

All remaining logical records in each file are data records of 2444 32-bit words each. Each data record contains data and ephemeris information for each of 12 one-second time intervals. For each second, and for both the e-MA and the e-S, there are 24 measurements from a particular channel, and a 25th number that is not used. (This 25th number may be due to the way the original packed experimenter tapes were unpacked.) The data for the 12 seconds are not in separate sections and the format of the data record is given in Tables 3 and 4. The first two 32-bit words are integers (INTEGER\*4), and all other words are single precision real numbers (REAL\*4). In Tables 3 and 4, L denotes the experiment index (1=e-MA, 2=e-S), M=index of seconds (12 per record), K=measurement index (25 per second).

TABLE 1. OV1-13 Concatenated Taped Contents

TAPE #	FILE #	DAY OF 1968	ORBIT #	NUMBER OF LOGICAL RECORDS	DESIGNATION OF EARLIEST NSSDC TAPE USED
1	1	134	269	486	D-11420
	2	135	276	800	D-11421
	3	137	291	802	D-11422
	4	139	298	776	D-11423
	5	141,142	319	632	D-11424
2	1	159	449	717	P-12
	2	166	494	744	D-12594
	3	174	559	751	P-16
	4	185	636	182	D-11312
	5	186	638	705	D-11313
	6	188	653	418	DC-794
3	1	191	679	744	D-11314
	2	192	687	767	D-11315
	3	193	688	276	D-11316

TABLE 2. Header Record Format  
for OV1-13 Concatenated Tapes

<u>WORD NUMBER</u>	<u>QUANTITY</u>	<u>UNITS</u>	<u>FORMAT</u>
1 and 2	Satellite	-	2A*4
3	Orbit Number	-	R*4 ?
4 and 5	Receiving Station	-	2A*4
6	Day of Month	-	R*4 I*4
7	Date of Merge Run	-	R*4 I*4
8	Start Time of Orbit	hours	I*4
9	Start Time of Orbit	mins.	I*4
10	Start Time of Orbit	secs.	I*4
11	Stop Time of Orbit	hours	I*4
12	Stop Time of Orbit	mins.	I*4
13	Stop Time of Orbit	secs.	I*4
14	Semi-major Axis (A)	km	R*4
15	Eccentricity (E)	-	R*4
16	Inclination (I)	degs.	R*4
17	Longitude of Ascending Node	degs. east	R*4
18	Arg. of Perigee (w)	degs.	R*4
19	? (Kx1)	?	I*4
20	? (Kx2)	?	I*4
21	Beginning L-Value of Magnetosphere Fit (L1)	e.r.	R*4
22	Ending L-Value of Magnetosphere Fit (L2)	e.r.	R*4

TABLE 3. Data Record Format  
for OV1-13 Concatenated Tapes

L = experiment index (1=e-MA, 2=e-S)  
M = index of seconds (1 to 12)  
K = measurement index (1 to 25)

WORD #	VARIABLE NAME AND ORDERING	DEFINITIONS
1	NFT	Integers that count the number of seconds of data that have been fitted.
2	NFTB	
3 - 26	((ENERGY(L,M),L=1,2),M=1,12)	A voltage from which the channel number is determined.
27 - 926	{ ((ALCRM(K,M,1), TH(K,M,1), DELTH(K,M,1), K-1,25),M=1,12)	For e-MA: ALCRM = a voltage from which is determined the log10 the number of counts; TH=aspect angle w.r.t. the B-field; DELTH=error in aspect angle due to uncertainties in fitting magnetospheric data.
927-1826	((ALCRM(K,M,2),THCK,M,2), DELTH(K,M,2),M=1,12)	same as words 27-926 for e-S (1,2)
1827-2174	((R(N,M),N=1,29),M=1,12)	R = ephemeris information, see TABLE 4.
2175-2198	((A(I,J),DELA(I,J),I=1,3), J=1,4)	For each Cartesian coordinate (I=1,2,3=x,y,z), the A's are parameter values for magnetosphere fits, where $B = A(I,1) + A(I,2) \times [\cos\{A(I,3) \times (t - A(I,4))\}]$ ; DELA = error in A
2199-2438	((GC(I,M),THC(I,M),I=1,10), M=1,12)	GC=Geigercounter rate meter data THC=Geigercounter aspect angle
2428-2444	ANOMT(NN), NN=16	ANOMT(1)=e-MA temperature monitor ANOMT(2)=Geiger counter temperature ANOMT(3)=e-MA high voltage monitor ANOMT(4)=e-S high voltage monitor ANOMT(5)=e-MA magnetic field monitor ANOMT(6)=Geiger counter high voltage monitor

TABLE 4. Ephemeris Array Contents

This table lists the probable contents of the ephemeris information variable R(N,M), words 1827 - 2174 of a data record. There are 29 quantities for each of the 12 seconds (M) in the data record.

R(1,M)=GMT days	R(16,M)=geocentric latitude
R(2,M)=GMT hours	R(17,M)=right ascension
R(3,M)=GMT mins.	R(18,M)=VI velocities (km/sec)
R(4,M)=GMT secs.	R(19,M)=B (gauss)
R(5,M)=elapsed sec.	R(20,M)=L (earth radii)
R(6,M)=local time days	R(21,M)=geomagnetic latitude
R(7,M)=local time hours	R(22,M)=geomagnetic longitude
R(8,M)=local time mins.	R(23,M)=inclination (degs)
R(9,M)=local time secs.	R(24,M)=declination (degs)
R(10,M)=mean anomaly	R(25,M)=Dx
R(11,M)=altitude above earth's surface	R(26,M)=Dy
R(12,M)=geodetic latitude	R(27,M)=Dz
R(13,M)=LO longitude (east)	} velocity vector components (km/sec)
R(14,M)=VF velocity (km/sec)	
R(15,M)=earth centered range to vehicle	R(28,M)=sun-shadow indicator, sun=0, no sun=1
	R(29,M)= ?

D-3385  
 DUMP OF TAPE ~~xxxx~~ top

R\*4 *o/p/p/o*

INPUT TAPE X-418 ON MS3  
 DATA INPUT H9 NF 5 FL 1 1 1 SR 5 1 1 SR 5 LAST 1  
 FILE 0) 10 RECORD 13 (1) b LENGTH 88 BYTES  
 ( 4) 4F56312D 31332020 000001DD 5354412E  
 ( 4) 00000013 0000002F 00000021 43AC3284  
 ( 8) 40600000 41280000 39312020 3FF19390

FILE	RECORD	486	LENGTH	9776BYTES
( 0)	000031F2	000031E7	40A7AF5E	402AD5AB
( 4)	3F6850A1	40B264C9	402AD5AB	40BC78F1
( 8)	40B1C387	40B850A1	40BC78F1	407B366C
( 12)	41E48A41	40356BCF	00000000	41E4A59B
( 16)	4061CF79	00000000	41E46E78	406425A1
( 20)	00000000	41E441B6	40680A8D	00000000
( 24)	41E41F85	4071BA12	4063468D	41E4167F
( 28)	40A20DFC	00000000	41E3FB6C	40A2FB9E
( 32)	00000000	41E40826	40A5A3BE	00000000
( 36)	41E41F88	40A817D3	00000000	41E429F8
( 40)	4027B8F7	403C78F1	41E4B211	40AEBDDA
( 44)	3FFC78F1	41E4F592	40A5FB36	4020C183
( 48)	41E542F2	40B129FA	3FF264C9	41E55EE1
( 52)	40B229DB	403264C9	41E588E7	40B22131
( 56)	4025CB97	41E6FB51	40B3BE15	402FDFBF
( 60)	41E77697	40B3B4BC	3F2850A1	41E7A143
( 64)	40B371D2	40D5A85	41E825AE	40B34F0E
( 68)	403264C9	41E8B037	40B2C271	3FED5AB5
( 72)	41E5774	40B0167E	00000000	41E8A8EC
( 76)	40AEC65B	40670E1C	41EB2739	40A5A487
( 80)	3F7C78F1	41EBC5BA	40ACD294	41EBFAE8
( 84)	41EC659B	40AB2A0A	4025C9B7	41EC980F
( 88)	40A56855	40376EDD	41E798D0	40A4B810
( 92)	4020C183	41EF15EF	40A29001	3FB264C9
( 96)	41EFAF17	40A053FE	00000000	41EFE155
( 100)	40B126C0	3FB264C9	41F17A98	3F6850A1
( 104)	402FDFBF	41F1FEE4	406CE0B7	403264C9
( 108)	41F27C74	40680FC2	00000000	41F2A485
( 112)	406344A9	00000000	41F3185E	4061AE3C
( 116)	3F2850A1	41F4411D	4027AEAE	402850A1
( 120)	41F491CB	3FFED15A	00000000	41F4A48A
( 124)	3FED7309	3FA850A1	41F4EE27	3FE8261E
( 128)	3FBC78F1	41F5279F	3FB264C9	403C78F1
( 132)	41F591E1	3FA510AC	00000000	41F59890
( 136)	3FBA2307	00000000	41F5A555	3FE074D5
( 140)	00000000	41F5A728	3FE9EB64	00000000
( 144)	41F59E06	3FF22646	00000000	41F5988D
( 148)	40213E6C	00000000	41F5312B	4021BFAD
( 152)	00000000	41F4F97D	4022C609	00000000
( 156)	41F4B78C	402311A3	00000000	41F49F55
( 160)	3F688206	4039F3E7	41F3A418	3FFE95E2
( 164)	40776EDD	41F33ABE	3FE968E2	406850A1
( 168)	41F2C918	3FF30609	406850A1	41F2A17A
( 172)	3FEB7678	40670E1C	41F2259F	3FE8B28E
( 176)	40670E1C	41F08AC5	3FE65949	4074E9D3
( 180)	41EFF6FA	3FEF2997	40648912	41EFC4BF
( 184)	3F779F2D	40670E1C	41E82888	3FA43B5D
( 188)	40699326	41E88F2C	3FBE89D9	3F6850A1
( 192)	41ECC66E	4023BEEF	4060C183	41EC900D
( 196)	40280E05	40712244	41E8F048	402D815F
( 200)	4063468D	41EB50F5	40340F5D	4039F3E7
( 204)	41EAB3AB	403C38BD	3F6850A1	41EA7FD6
( 208)	4068D1AF	403C78F1	41E8C067	4069F57D
( 212)	407A7F5E	40E2F5EB	407B366C	40BC78F1
( 216)	40A7AF5E	40A7AF5E	3F2850A1	407C78F1
( 220)	4030A401	4030A401	41E4D005	00000000
( 224)	41E47FB4	00000000	403EEA4C	41E49216
( 228)	4068C39C	41E44F77	00000000	40667728
( 232)	00000000	406F8633	00000000	00000000
( 236)	41E3F998	00000000	40A11B23	00000000
( 240)	40A4C6A4	41E402B3	40A4C6A4	41E402B3
( 244)	00000000	40A74C76	00000000	00000000
( 248)	41E4FB60	4065CB97	40A99C00	41E43569
( 252)	40AF7304	41E4DDF5	3FE3468D	40AEF3E3
( 256)	4025CB97	40B0C6B5	41E52814	402AD5AB
( 260)	4025CB97	4063468D	40B1D88C	41E578DC
( 264)	41E599DF	4063468D	4063468D	41E599DF
( 268)	40B2E807	41E5F9F6	402D5A85	40B2B193
( 272)	3FA850A1	40B3BE56	41E74CB2	3FF76EDD
( 276)	41E7F8D4	41E88167	40B38E68	41E76CAE
( 280)	40B2F748	41E88167	40B38E68	41E76CAE
( 284)	3F6850A1	40B07A97	41EA245A	3FB264C9
( 288)	41E9C682	4065CB97	40AF3F45	41EABE8A
( 292)	406E78B6	41F1D383	40670E1C	41EABE8A
( 296)	3F7C78F1	4069AA76	41EB90B2	40ADDB77
( 300)	41F2E2AF	00000000	40AD57B7	41EB90B2
( 304)	403D0E02	41F36109	40ABBB9F	41E30336
( 308)	41F4D88B	4021DB18	402AD5AB	41E30336
( 312)	3F6850A1	3FF264C9	40A114A8	40A114A8
( 316)	41F4D88B	41F5159C	4065CB97	41EE22B
( 320)	3F8BE0B5	3F7C78F1	4065CB97	41EE22B
( 324)	3F2850A1	00000000	4065CB97	41EE22B
( 328)	41F5A7C4	00000000	4065CB97	41EE22B
( 332)	3FE6E4AD	00000000	4065CB97	41EE22B
( 336)	00000000	3FEF8D66	00000000	00000000
( 340)	41F54168	00000000	41F54168	00000000
( 344)	40228368	41F50D33	40228368	40228368
( 348)	00000000	40230D0F	00000000	00000000
( 352)	41F57829	40B8B162	40B8B162	41F57829
( 356)	3FFB487B	41F35ECE	3FFB487B	41F35ECE
( 360)	406850A1	40670E1C	406850A1	40670E1C
( 364)	41F24FB6	4074E9D3	3FE54A00	4074E9D3
( 368)	3FE2D183	41F1C722	3FE2D183	41F1C722
( 372)	40699326	3F222D92	40699326	3F222D92
( 376)	41EF5EFE	40670E1C	41EF5EFE	40670E1C
( 380)	3FB59FE6	41EEC398	3FB59FE6	41EEC398
( 384)	4025CB97	40215495	4025CB97	40215495
( 388)	41EC25B2	403EEDFB	41EC25B2	403EEDFB
( 392)	403264C9	41E885E1	403264C9	41E885E1
( 396)	4039C6F5	406850A1	4039C6F5	406850A1
( 400)	41E8F015	4063468D	41E8F015	4063468D
( 404)	4063468D	41E862DF	4063468D	41E862DF
( 408)	4063468D	403C78F1	4063468D	403C78F1

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( 7760)	4UE2AU9D	5EF9E56A	4UA6U78A	BED3BF44	423C372U	BE92U79A	41251F88	3FA6EU65	BFCU497C	40E1AD5E
( 7800)	00000000	442CA8F2	416A0000	00000000	41300000	41AF0000	42AFF000	41680000	412C0000	41A2C000
( 7840)	41748780	4239E37C	43AC69AA	BF158B9D	422A9A78	4CE2A18D	43B9B3A6	BF15AAD9	41B3619B	40E2A18D
( 7880)	3EF9E4B1	40A605B5	BED3CE32	423C367F	B921577	41251D2C	3FA6978C	BFC031E8	40E1ADB6	00000000
( 7920)	442CA8EE	416A0000	00000000	41300000	41800000	42B00000	41680000	412C0000	41A20000	41732940
( 7960)	4239E568	43AC8895	BF15AC7C	422A9A05	40E2A27C	43B9B290	BF15CBA0	41B3619B	40E2A27C	3EF9E5F9
( 8000)	40A603DF	BED3DD21	423C35DD	B922356	41251ACD	3FA64EAE	BFC01A53	40E1A8EF	00000000	442CA8EA
( 8040)	416A0000	00000000	41300000	41B10000	42B01000	41680000	412C0000	41A20000	4171C880	4239E755
( 8080)	43A0C77F	BF15CD5C	422A9992	40E2A36C	43B9B17B	BF15EC69	41B3619B	40E2A36C	3EF9E741	40A6C20A
( 8120)	BED3EC10	423C353B	BE923137	4125186E	3FA605CC	BFC028BD	40E1AE66	00000000	442CA8E6	416A0000
( 8160)	00000000	41300000	41B20000	42B02000	41680000	412C0000	41A20000	41706E00	4239E941	43A0C669
( 8200)	BF15EE3E	422A991F	40E2A45C	43B9B066	BF160D33	41B3619C	40E2A45C	3EF9E88B	40A6C035	BED3FB00
( 8240)	423C349A	BE923F19	41251610	3FA58CE6	BF9FF594	4CE1A8BE	00000000	442CA8E2	416A0000	00000000
( 8280)	41300000	41B30000	42B03000	41680000	41A20000	412C0000	416F1000	4239EBE2	43A0C553	BF160F20
( 8320)	422A98AC	40E2A54C	43B9AF50	BF162DFE	41B3619C	4FE2A54C	3EF9E9D6	40A5FE61	BE9409F0	423C33F8
( 8360)	BE924CFD	412513B1	3FA573FB	BF9FE9C8	40E1AF16	00000000	442CABDE	416A0000	00000000	41300000
( 8400)	41B40000	42B04000	41680000	412C0000	41A20000	41680000	4239ED18	43A0C43D	BF163004	422A9839
( 8440)	40E2A63C	43B9AE3A	BF164ECB	41B3619C	40E2A63C	3EF9EB21	40A5FC8C	BED418E1	423C3356	BE925AE3
( 8480)	41251152	3FA52B0C	BF9FD0FC	40E1AF6D	00000000	442CA8DA	416A0000	00000000	41300000	41B50000
( 8520)	42B05000	41680000	412C0000	41A20000	416C5480	4239EF07	43A0C327	BF1650E9	422A97C7	40E2A72C
( 8560)	43B9AD24	BF166F99	41B3619C	40E2A72C	3EF9EC6E	40A5FAB8	BED427D3	423C32B5	BE9268CA	41250EF4
( 8600)	41680000	412C0000	41A20000	416AF680	4239F0F4	43ACC211	BF1671D0	422A9754	41B60000	42B06000
( 8640)	BF169068	41B3619D	40E2A81C	3EF9EDBC	40A5F8E4	BED436C6	423C3213	BE9276B3	41250C96	43B9AC0E
( 8680)	BF9FC663	40E1B01A	00000000	442CAB82	40AD5866	3EEBA353	407FE26F	3E6E6B65	40AF16F2	3FA49920
( 8720)	4023653A	3EFA548F	00000000	00000000	40AD3C89	3EEF3EB5	4036215C	3EE99B84	00000000	00000000
( 8760)	4036FEF1	3EBA32B8	BF6D96ED	3FB35451	00000000	00000000	BF9B32F9	3FA0CF3D	4039F3E7	4220FDD1
( 8800)	3FFC78F1	42211DAA	4034E9D3	42213C1C	3FE850A1	4221591A	3F8264C9	42217495	3FFC78F1	42218E7F
( 8840)	402850A1	42209F7E	3FE3468D	42207750	3FFC78F1	42204DA3	4063468D	42202285	3FF264C9	4220C61C
( 8880)	402D5AB5	411F906D	411F324A	411FC847	402CC183	411FC4A6	4025CB97	41FECC93	402FDFBF	41F1C3FE
( 8920)	406C1830	411F1627	40670E1C	411FC847	411FC847	41EDD652	4063468D	41ED592E	3FE850A1	41EF4ED1
( 8960)	4023468D	41EED12B	40648912	41EE53A9	40670E1C	41BE94AE	402AD5AB	41BDC135	3FE850A1	41BCF001
( 9000)	402D5AB5	41E02109	402FDFBF	41BF6A56	40670E1C	41BA880E	402D5AB5	41B9C3FF	403264C9	41AAF9AD
( 9040)	4023468D	41AC92DA	4063468D	41AA243	3FF264C9	41AA82FA	403264C9	4189C3FF	3FE850A1	41AA5DC1
( 9080)	402650A1	41AA57FA	4065CB97	41AA5AD2	402850A1	41AA6652	402850A1	41AA7A79	40670E1C	41B8019C
( 9120)	406C1830	41AA57FA	4065CB97	41AA5AD2	402850A1	41AA6652	402850A1	41AA7A79	40670E1C	41B8019C
( 9160)	406C1830	41AA57FA	4065CB97	41AA5AD2	402850A1	41AA6652	402850A1	41AA7A79	40670E1C	41B8019C
( 9200)	4023468D	41B8CCBD	4023468D	41B99B3D	3FBC78F1	41BA6CED	3F7478F1	41BF90D6	406C183	41BC1933
( 9240)	4023468D	41BCF374	402A05AB	41BDD03E	3FE3468D	41EEAF6B	403C78F1	41BF90D6	3FF264C9	41EC051D
( 9280)	402D5AB5	41ED5118	3FE850A1	41EDCCF8	4034E9D3	41EE4487	403C78F1	41EEC487	4023468D	41EF3FB4
( 9320)	4023468D	41EFBAE6	403C78F1	41F035DD	3FED5AB5	41FCB091	40670E1C	41F12AFB	402AD5AB	41FD67E8
( 9360)	402850A1	41FDC4F	4063468D	41FE2B04	403C78F1	41FE89F3	402FDFBF	41FE704	40670E1C	41FF4220
( 9400)	406850A1	41FF9B2E	40620408	41FFF216	406C183	422C235E	406850A1	42204C83	40376EDD	42222081
( 9440)	40670E1C	4222143E	4034E9D3	422203E3	4023468D	4221F57A	406850A1	4221E30B	3FF264C9	4221CEA2
( 9480)	403264C9	4221A010	402D5AB5	4025CB97	4039F3E7	42218600	406850A1	4221E30B	3FF264C9	4221CEA2
( 9520)	406850A1	41F88B96	3FE264C9	41F818BB	4025CB97	41F7A50A	4039F3E7	41F73091	3FFC78F1	41F8FD8F
( 9560)	3FFC78F1	41F64573	40376EDD	41F5CEE5	402C183	41F557BA	3FE3468D	41F45FFD	403264C9	41F68B5B
( 9600)	40378F1	41E7178F	403C78F1	41E69C59	403C78F1	41E621FB	4025CB97	41E5A7BF	40670E1C	41E92D4
( 9640)	403C78F1	41E4B492	402850A1	41E43BB6	403264C9	41E3C36A	4025CB97	41E5A7BF	40670E1C	41E92D4
( 9680)	402C183	41AFEA3	3FBC78F1	41AF5D1A	3F6850A1	41AED5D8	403C78F1	41E348A9	40670E1C	41B07E39
( 9720)	4023468D	41AD67FA	4023468D	41ACFC0E	402850A1	41AC977D	3FE3468D	41A5517	4023468D	41ADDB10
( 9760)	40B6CD9B	4065CB97	40AC183	40B1C387	402850A1	41AC977D	3FE3468D	41AC3A7C	40A52A54	40AB76ED

FILE INPUT DATA RECORDS MAX. INPUT RECS. 5 632 633  
 DUMP STOPPED AFTER FILE 5 # OF PERMANENT READ ERRORS 0  
 READ ERROR SUMMARY PERM ZERO B SHORT UNDEF. #RECS. TOTAL#  
 0 0 0 1 1

EOJ START TIME 02/14/79 17:51:22 STOP TIME 02/14/79 17:55:12



